C.A.R. 0.4-B regulations. The landing weight is 68,000 lb and the payload 14,758 lb. Operational weight empty, including all residual fuel and crew, is 48,242 lb, and Canadair claim that the maximum continuous cruising speed at 32,000ft is 325 m.p.h., and the economical cruising speed at 25,800ft at the maximum all-up weight is 315 m.p.h. Range with 8,750 lb is 4,060 statute miles, but with the maximum payload in still air it is 2,900 miles. The four-engine service ceiling was found to be 29,900ft at 68,000 lb weight, and flying tests have shown that the Canadair IV can be landed over a 50ft screen in 1,500 yards, and moreover after being flown off the ground during take-off, it can be landed and brought to a standstill in slightly less than 1,700 yards.

If B.O.A.C. will consider purchasing the Canadair IV, the company would allow the Corporation to make payment over a prolonged period, as the aircraft earned money. The Canadians would be prepared to grant preferential terms to British operators, owing to the good relationship which exists, and such arrangements would certainly not be granted to other countries. The actual price would be about $540,000 for each aircraft, taking into account the cost of the engines, which would naturally have been paid for in sterling. Two Canadair IVs could be purchased for the price of one Stratocruiser or one Constellation 749 with duty. Obviously the most important feature is that any number up to five of these aircraft could be delivered to B.O.A.C. immediately and one each month could then follow.

When asked whether there was any possibility that the aircraft might not be suitable for Empire routes, having in mind operating difficulties in tropical conditions from airfields at high altitude, Mr. T. J. Emmert, the assistant general manager, was confident that all tests which had been made were as exacting as any operational conditions that could be met on the B.O.A.C. routes. The Merlin, he said, had been found to be an efficient engine when taking off in tropical conditions from airfields at 6,000ft. With 80,200 lb the Canadair IV would unstick at sea-level on three engines in just over a thousand yards, and on four engines in just over 900 yards.

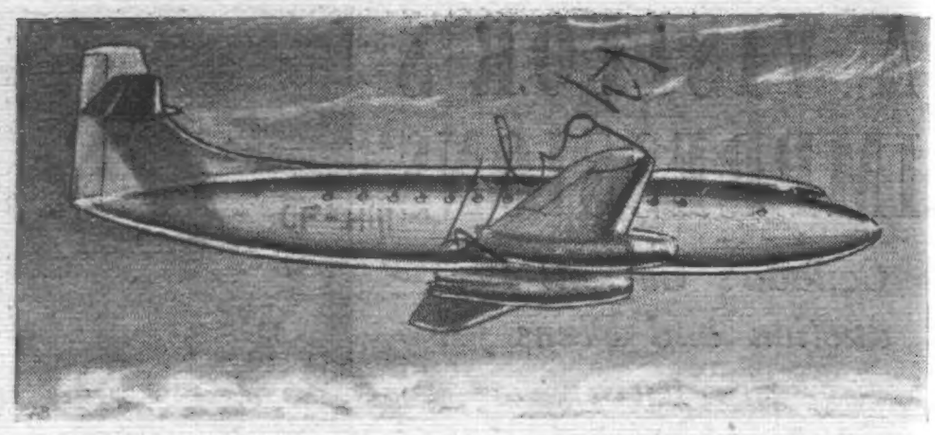
Exhaust noise and cooling had received a great deal of attention and Canadair have designed a fresh-air cooling shroud which is highly successful. Pressurization was effective, and a cabin height of 8,000ft could be maintained up to 20,000ft and of 11,200ft up to 25,000ft. Ground pressure could be maintained up to 9,500ft. The introduction of Canadair IVs on the B.O.A.C. routes would establish maintenance bases and a spares organization around the world since the extended B.O.A.C. routes to the Far East will eventually link-up with the projected T.C.A. routes westwards across the Pacific. Such an Empire scheme would be of obvious benefit to the English and Canadian operators, not only on scheduled services but on those occasional and increasingly frequent long-distance charter flights which are periodically undertaken.

Canadair plans for the future are not decided, but a replacement for the DC-3 has been suggested. There is no immediate plan to enter the field of military aircraft production.

Avro Canada

In the plant at Toronto, occupied during the war by the Victory aircraft company and in which Lysanders, Ansons, Lancasters, Lincolns and one York were built, A .V. Roe, Canada, Ltd., has been established. Although Sir Roy Dobson is president of this company, which is a member of the Hawker-Siddeley group, there is no control from Great Britain. Mr. E. H. Atkin, who was assistant to the late Roy Chadwick in designing the Lancaster at Manchester, was made chief designer of the Canadian factory soon after the end of the war, and he is now responsible for the design of the C. 102 jet transport and the jet fighter which is being developed for the Royal Canadian Air Force.

Trans-Canada Airlines are operating, and will continue to operate, Douglas Dakotas along the inter-city routes across Canada, but the time is not far distant when a replacement type will be necessary, and it is for such a purpose that A. V. Roe, Canada, have designed, in co-operation with T.C.A., the jet airliner Type C.102. Over Europe, with traffic conditions as they are at present, and with no signs of immediate improvement, the operation of gas turbines cannot be an economic proposition on short hauls. In Canada, however, where the average distance between important cities is about 500 miles, and with the corridor air traffic control system operating successfully, vertical stacking is unknown, and consequently there is a place for the airliner powered by gas turbines. Moreover, the traffic potential is sufficiently large to warrant high frequency and therefore high speed is an economic requirement. Before air traffic intensity is so great as to cause congestion, it is hoped there will be far-reaching developments in control.



An artist's impression of the A. V. Roe Canada jet airliner C.102, the prototype of which is expected to fly early next year. The power-assisted steerable nosewheel, together with the hydraulic system for flaps and undercarriage operation, is being supplied by Dowty Equipment, Canada, Ltd.

Long-Term Policy

The Canadians look upon airscrew turbines as an interim measure only, and have made it a definite policy to develop the turbo-jet for civil purposes. The C.102 has been designed as an all-metal low-wing monoplane to accommodate 40 passengers, with a range of about 1,000 miles and a cruising speed of about 400 miles an hour. Four Derwent V gas turbines, each giving 3,500 lb thrust, will be installed in pairs in a single nacelle on each wing but having separate jet tail pipes. The designers have accepted the military development data for this engine and claim that the C.102 will be more economical to operate than aircraft at present in use. In appearance, the transport is conventional; having a slightly sharper nose than that of the Tudor, but with a single large tail and cylindrical, fully pressurized and air-conditioned fuselage, and a high tailplane. The speed of the C.102 will permit about two inter-city flights in the time taken by the Dakota to make one, and since the traffic potential is high, there will be a resulting high utilization and economy. In about twelve months time, this aircraft should fly for the first time from Malton airport at Toronto, and already A. V. Roe have created an enormous amount of interest in Canada by spreading the news of impending *jetsound* and *jetspeed*. News of the Chinook gas-turbine was scarce, but development is progressing satisfactorily and they are confident of its ultimate success.

Whilst in Canada I thought it would be interesting to know details of the type of freighter that would be most acceptable for use in the North American Continent, and a rough specification suggested that a range of 1,500 miles was essential, with a capacity of about two tons, powered by at least two engines. A high cruising speed was not thought to be essential, and 200 m.p.h. was mentioned. Owing to the development of mining in Canada, a freighter will be necessary for carrying equipment into remote areas and for flying out the mined metals. For this it was thought that the aircraft should be capable of landing on water, and should, therefore, be equipped with either floats or a hull and also be convertible for use with wheels and skis. There was also a strong line taken that performance should include exceptional climbing ability for flying out of small areas surrounded by tall trees or hills. Above all, easy maintenance would be essential.

Unfortunately there was no time to visit de Havillands.

METEOR TRAINER FLIES

March 19th was the date of the first flight of the Gloster Meteor Trainer (two R.-R. Derwent V). The pilot was S/L. Waterton and the "pupil" Mr. Rodney Dryland, another Gloster test pilot. Waterton reported little difference from the fighter version in handling qualities